Y-12 PLANT

SITE PROFILE

December 1999

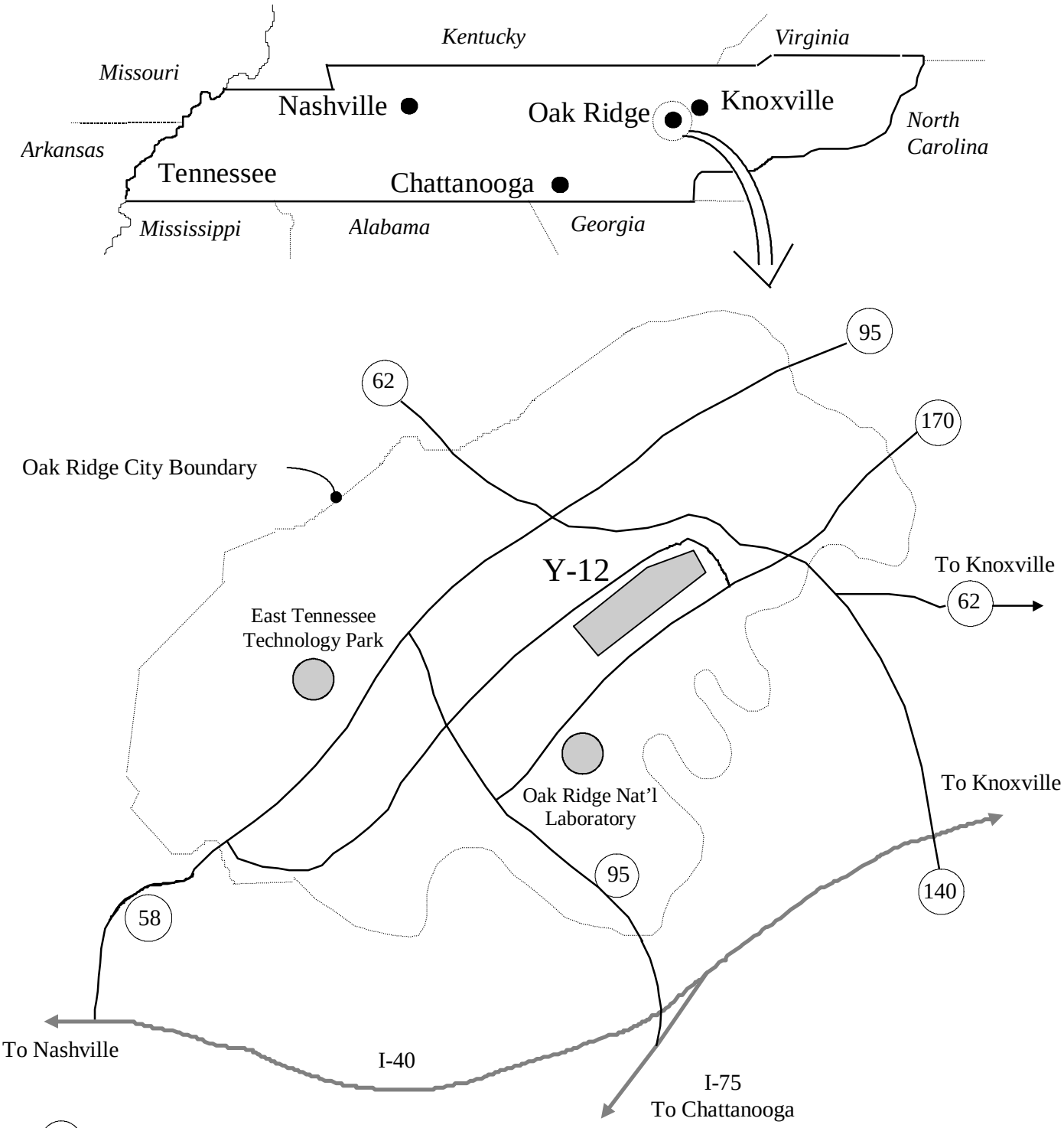
Office of Oversight
Environment, Safety and Health
U.S. Department of Energy

TABLE OF CONTENTS

Site profiles provide information on Department of Energy sites, including background; major environment, safety, health initiatives and activities; items for management attention; and performance.

The electronic version of this site profile and other Office of Oversight documents referenced in this document can be accessed through the Internet at **http://www.tis.eh.doe.gov/oversight/bookcase2.html**.

Comments regarding the contents of this document should be directed to Larry McCabe at 301-903-2845, or via the Internet at **larry.mccabe@eh.doe.gov**.


Kentucky
Virginia
Missouri
Nashville
Oak Ridge
Knoxville
North Carolina
Arkansas
Tennessee
Chattanooga
Mississippi
Alabama
Georgia
95
62
170
Oak Ridge City Boundary
Y-12
To Knoxville
62
East Tennessee Technology Park
Oak Ridge Nat'l Laboratory
To Knoxville
95
140
58
To Nashville
I-40
I-75
To Chattanooga
64 Indicates State Route 64
Scale in Miles (approx.)
0
4
8

Y-12 Map

Y-12 PLANT

BACKGROUND

Description

The Y-12 Plant is located in the Bear Creek Valley about two miles from downtown Oak Ridge, TN. The Plant occupies about 811 acres within the Oak Ridge Reservation.

The site's key facilities include buildings and complexes that house facilities used for the processing, machining, and manufacturing of depleted uranium parts. Other facility missions include:

- Lithium production and manufacturing
- Processing and preparation of nuclear components for shipment
- Quality evaluation of nuclear weapon stockpile components
- Storage of enriched uranium weapon components and other special nuclear material
- Enriched uranium recovery from scrap material
- Recovery, purification, and processing of enriched uranium into usable products or forms suitable for long-term storage.

The site's key facilities also include buildings, now shut down, that were originally used for separation of uranium and lithium isotopes.

The site's key facilities are described in Appendix A. Each facility's description includes mission/status, hazard classification/ authorization basis, worst-case design basis accident, and principal hazards and vulnerabilities. For the purpose of the profile, a key facility is a facility, building, or complex that is significant from an environment, safety, or health perspective.

Mission

The site was established in 1943 as part of the Manhattan Project to produce highly enriched uranium and other components for nuclear weapons. The current Y-12 missions include the dismantlement of nuclear weapons; the manufacturing of weapon components for defense capability; the warehousing of special nuclear material, including storage of designated material under International Atomic Energy Agency safeguards; the maintenance of nuclear weapons production process technology; stockpile maintenance and evaluation; nonproliferation and arms control; technology transfer; work for others; environmental restoration; and waste management.

Management

The lead program secretarial office at Y-12 is the U.S. Department of Energy (DOE) Office of Defense Programs (DP). The Office of Environmental Management (EM) also has significant interests and program activities on site in the areas of environmental restoration and decontamination and decommissioning (D&D). The principal DP and EM offices and their respective areas of responsibility are indicated in Table 1 below.

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Table 1. Principal Headquarters Program Offices and Responsibilities for Y-12

Headquarters Program Office	Responsibility
Office of Defense Programs (DP)	Responsible DOE office for Y-12
Deputy Assistant Secretary (DAS) for Military Application and Stockpile Management (DP-20)	Nuclear stockpile management
Office of Nuclear Weapons Management (DP-22)	Weapons program management
Office of Site Operations (DP-24)	Management of facilities used to store and maintain nuclear weapons stockpile
DAS for Waste Management (EM-30)	Waste management
DAS for Environmental Restoration (EM-40)	Environmental restoration management
DAS for Nuclear Material/Facility Stabilization (EM-60)	Decontamination and decommissioning (D&D)

Lockheed Martin Energy Systems, Inc. (LMES) has managed all contractor activities at Y-12 from October 1, 1995, through April 1, 1998, under a cost-plus-award fee contract. Renegotiations between LMES and DOE in 1996 resulted in a modification of this contract to an incentive task order contract with incentive fee elements until March 31, 2000. As shown in Table 2, Bechtel Jacobs Company (BJC) was selected as the new management and integration contractor for Oak Ridge, including the Y-12 Plant. The BJC contract was awarded on December 18, 1997, and is effective from April 1, 1998, through September 30, 2003, for an estimated $2.5 billion. The contract includes a five-year contract extension option dependent upon BJC performance. The primary LMES construction operations subcontractor, MK Ferguson-Oak Ridge Company (MKFO), is also shown in Table 2.

Table 2. Y-12 Plant Operating Contractors

Lockheed Martin Energy Systems, Inc. Primary management and operating (M&O) contractor, responsible for the site's nuclear facility operations, including the storage of enriched uranium weapons components and other special nuclear materials (SNM)	
Bechtel Jacobs Company LLC Primary management and integration (M&I) contractor for the environmental management program, enrichment facilities program, and reindustrialization support for DOE facilities in Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio. Focused responsibility is on accelerated cleanup activities.	
Subcontractor	**Responsibilities**
MK Ferguson - Oak Ridge Company	Construction contracting, sitewide

As of October 13, 1999, the Y-12 site had approximately 30 Federal employees and approximately 5,300 non-Federal workers (including major contractor employees and all subcontractor employees). Some of these same Y-12 non-Federal workers are also employed at other Oak Ridge sites.

There are two principal bargaining unit bodies: The International Guards Union of America and the Atomic Trades and Labor Council (ATLC), which represents 14 independent unions.

Budget

The information appearing in this section has been gathered from a number of sources and represents the best available budget information at the time of profile publication. This information is dynamic, depending on the point in the budget cycle at which it is obtained. It is included to provide the reader with a sense of the magnitude and sources of the budget for this site. It is not intended to be the definitive source of budget information.

Table 3 illustrates the total operating budget breakdown by programmatic office.

Table 3. Major DOE Program Funding (In Thousands)

Organization	FY 1999 Actual	FY 2000 Request
Assistant Secretary for Defense Programs (DP)	$432,240	$394,800
Assistant Secretary for Environmental Management (EM)	2,400	2,400
Total	**$434,640**	**$397,208**

The budget data is as reflected in the FY 1999 financial plan. FY 2000 requests are also as of this date. The FY 2000 funding does not include changes that may be reflected in the appropriations bill.

In September 1998, the House Subcommittee on Military Procurement approved a total of $424 million for the stockpile program at Y-12. Additional funding was also approved to carry out the recommendations of the 1997 study of highly enriched uranium (HEU), including seismic upgrades to storage fixtures and removal of HEU from Y-12 facilities, physical plant improvements, advanced manufacturing technologies, uranium reprocessing, and safety program maintenance. At the same time, the subcommittee also authorized $183 million in environmental management funds to Oak Ridge, a portion of which will be applied to Y-12.

Significant Commitments to Stakeholders

Federal Facility Agreement (FFA)

Y-12, as part of the Oak Ridge Reservation, was placed on the National Priorities List (NPL) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in December 1989. The CERCLA activities are covered under a 1992 FFA, a tri-party agreement among DOE, the Environmental Protection Agency (EPA), and the Tennessee Department of Environment and Conservation (TDEC). The FFA is an umbrella agreement to establish a procedural framework and schedule to investigate and remediate contaminant releases and potential releases at the Oak Ridge Reservation in accordance with CERCLA requirements. Cleanup strategies and priorities are based on human health and environmental risks; milestone commitments are negotiated annually with the regulators and with public input. The FFA addresses legacy waste sites and contaminated areas across the Oak Ridge Reservation.

Agreement in Principle (AIP) with TDEC

In May 1991, DOE established an AIP with the TDEC Oversight Division to provide a mechanism for TDEC to perform monitoring and conduct oversight activities across the Oak Ridge Reservation. In September 1996, the May 1991 AIP was modified into two separate TDEC grants: one addressing TDEC site monitoring and oversight responsibilities, and the other focusing on other TDEC regulatory responsibilities associated with the FFA.

Federal Facility Compliance Agreements (FFCA)

In February 1992, an FFCA under the Toxic Substances Control Act (TSCA) was established among DOE, the EPA, and the State of Tennessee to clean up site polychlorinated biphenyls (PCBs).

Site Treatment Plan

In September 1995, a Tennessee State Commissioners Order, as required under both the Resource Conservation and Recovery Act (RCRA) and the FFCA, was issued to implement the Site Treatment Plan (STP). The Commissioner's Order requires treatment of mixed wastes according to approved schedules in order to comply with RCRA requirements for mixed waste.

In September 1998, Y-12 management stated that TDEC had refused to grant an extension and

revision of several STP milestones that had been requested in August 1998. The extension and revisions were requested regarding incinerable waste and Central Neutralization Facility sludge treatment milestones. A formal dispute resolution is in progress between DOE and TDEC officials.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The Y-12 Plant has a radionuclide NESHAP FFCA that was issued in May 1992. Significant elements of this agreement included compliance schedules, procedures for appropriate and timely notifications, and reporting requirements. In addition, a Memorandum of Understanding (MOU) between the EPA and the DOE was released in April 1992 to explain responsibilities regarding the Clean Air Act Emission Standards for Radionuclides (40 CFR Part 61, including Subparts H, I, Q, and T). Noteworthy clarifications of this MOU included alternate monitoring methods, use of engineering calculations, and reporting procedures for emissions from diffuse sources. Although these agreements were between the EPA and the DOE, TDEC officials were aware of these negotiations when the State of Tennessee assumed responsibility for the NESHAP program.

Defense Nuclear Facilities Safety Board (DNFSB) Recommendations

With the closing of Recommendation 94-4, "Deficiencies in Criticality Safety at Oak Ridge Y-12 Plant," there are no outstanding site-specific DNFSB recommendations at Y-12.

MAJOR ENVIRONMENT, SAFETY, AND HEALTH INITIATIVES/ACTIVITIES

Waste Management

Waste management activities are conducted under the requirements of RCRA, DOE orders, and other Federal and state laws. Onsite waste management facilities treat, store, and dispose of waste generated at the Y-12 Plant, including waste from environmental restoration activities. Some waste is also prepared for offsite transfer for treatment or disposal. The Department's report *Complex-Wide Review of DOE's Low-Level Waste (LLW) Management ES&H Vulnerabilities*, published in May 1996, cited Oak Ridge Reservation as having special-case waste with no path forward for disposition. All actions associated with this citation have been completed. Another citation concerned emergency management planning for natural phenomena impacting Oak Ridge Reservation's low-level waste management facilities.

BJC is developing a priority list for updating the safety documentation for its facilities, including the three facilities at Y-12 (e.g., the low-level waste compactor, above-grade storage pad, and the Old Salvage Yard) that are the responsibility of EM. Once the safety documentation needs are prioritized, work on updating the documentation for the highest priority facilities can begin. Schedules for completing the required documentation for the three facilities will be based on the facility prioritization schedule, with an expected date of completion by winter 1999.

In mid-June 1998, BJC announced its selection of East Tennessee Materials and Energy Corp. (Oak Ridge, TN) and Waste Control Specialists (Pasadena, TX) for the treatment of five categories of waste from the Oak Ridge Reservation and other DOE sites. Disposal will occur at facilities under contract to the Department for mixed waste disposal. The award is for a five-year contract.

On September 21, 1998, BJC awarded a $250,000 waste disposal contract to Waste Management, Morrison Knudson and IT Corp., and Foster Wheeler for preliminary design of a waste disposal facility to be located in East Bear Creek Valley, southwest of the Y-12 Plant. The proposed facility will include a disposal cell, a leachate collection and transfer facility, support facilities, access roads, stormwater retention basins, and monitoring systems. Upon completion of the preliminary design, the contract teams will compete for the final design and construction of the disposal facility. The preliminary plans for the facility were completed

in December 1998, and DOE plans to complete a record of decision on the facility by December 1999. The waste site is expected to open in 2001.

On October 5, 1999, BJC awarded a $41 million dollar waste to Westinghouse Safety Management Solutions and Morris Knudsen Corporation for waste treatment and disposal at Y-12. The three-year subcontract has a two-year option. The company has partnered with Radian International, Pacific Western Technologies, High Performance Professionals, EET Corporation, and East Tennessee Mechanical Contractors to perform the work. The new contractor will downsize the current program from 77 BJC employees to about 55 personnel, resulting in a net job loss of 22 individuals.

Decontamination and Decommissioning

The Facility Transition Program Plan and the Integrated Schedule for the Shutdown of Buildings 9201-5, 9204-4, and 9401-2 form the basis of the DP surplus facility management program at Y-12. Capital projects, deactivation facility walkdowns, and deactivation schedules are outlined in these plans. Many of the major facilities projected to become surplus to future DP manufacturing requirements at Y-12 remain active, with ongoing operations in portions of the facilities. For those facilities that have been declared surplus, the Y-12 facility transition program is the basis for the planning and budgeting that support annual inspections. Approximately 50 facilities have been declared surplus at Y-12, totaling approximately 62,000 square feet. Of this square footage, three buildings (e.g., 9201-5, 9204-4, and 9401-2) represent 76 percent of the total, or approximately 47,000 square feet. None of these 50 facilities has been shown, through inspection, to represent a high risk to the environment or to the health or safety of employees. However, five years and a substantial budget may be required for DP to bring these buildings to a safe, compliant shutdown mode suitable for transfer to EM.

Construction Activities

As of the end of July 1999, the Y-12 Plant had 45 major general plant projects (i.e., greater than $500K): two planned, 19 ongoing, and 24 nearing completion or complete. Most of these projects are upgrades/modifications to ventilation systems, air conditioning systems, machines, and equipment. Nearly two-thirds of the projects are related to or contingent on enriched uranium operations. During the same period, DP funded no major environmental restoration and waste management projects in the field, and none are proposed.

ENVIRONMENT, SAFETY, AND HEALTH ITEMS FOR MANAGEMENT ATTENTION

This section identifies areas of concern to the Office of Oversight related to Y-12 environment, safety, and health (ES&H) programs and their implementation. Previous versions of the Y-12 site profile noted issues that were identified during reviews conducted by the Office of Oversight, the Y-12 Site Office, and Y-12 contractor line management. More recent Office of Oversight reviews include the October 1998 evaluation of emergency management programs across the DOE complex and the January 1999 review of the effectiveness of DOE occupational medicine programs.

Eleven ES&H issues were identified during the most recent Office of Oversight integrated safety management (ISM) evaluation of Y-12, conducted October-December 1998. The report of this evaluation is available through the Internet at **http://tis.eh.doe.gov/oversight/reviews/index.html**. These 11 issues will be tracked in accordance with the approved DOE Implementation Plan for DNFSB Recommendation 98-1 and are the items discussed in this section.

Such issues as well as the site corrective action responses are currently listed in the DOE Corrective Action Tracking System (CATS) and

are available electronically through the Internet at **http://www.tis.eh.doe.gov/portal/catsentry.html**. CATS data includes a description of the corrective actions for each issue, the planned completion date, and the appropriate points of contact.

DP approved the Y-12 corrective action plan on May 4, 1999. Detailed information on each corrective action is available electronically through the CATS system as noted above.

Emergency Management Programs

OR, YSO, and LMES have not provided the necessary leadership to implement an effective emergency management program; significant weaknesses are evident in individual performance, procedures, training, facilities, hazards assessments, coordination with offsite organizations, and implementation of the Oak Ridge Reservation Emergency Plan.

Action Status

LMES has assigned a dedicated senior manager with full-time responsibility for emergency management implementation at the Y-12 Plant. LMES has also issued a procedure, "Y-12 Emergency Management Hazard Assessments Process," to facilitate the implementation of an effective emergency management program. The contractor will continue the development of a hazard assessment process for all of the 582 Y-12 facilities. This issue has 41 LMES corrective actions. Twenty have been closed, and the remaining 21 are scheduled for completion by December 2000.

Integrated Safety Management

The Y-12 Plant has placed lower priority on ISM, disciplined conduct of operations, training, hazard identification and analysis, hazard controls, subject matter expert involvement, industrial safety, worker involvement, and improvements to safety performance at non-nuclear facilities. Deficiencies in implementation of safety management were evident at the General Manufacturing Facility.

Action Status

LMES has revised and issued the Y-12 Site Conduct of Operations Manual for the entire site, including the General Manufacturing Facility. LMES has also revised and issued a site procedure, "Y-10-012 – Job Hazard Identification, Maintenance and New Work Tasks," to establish trigger mechanisms for line managers to involve the appropriate ES&H disciplines in the development of work planning. The new revision added two areas, Environmental and Waste Management, to the hazard identification checklist. This issue has 12 corrective actions. Five have been closed, and the remaining seven are planned for completion by December 1999.

OR Critical Hires and Retraining

OR has not maintained a current strategic plan for accomplishing safety goals that address the anticipated losses of critical skills, upgrade of Y-12 Plant facility, long-range training plans for Federal staff, defined career paths for OR/YSO senior technical managers and Facility Representatives, maintaining site infrastructure, and the decommissioning of surplus facilities.

Action Status

OR published a needs analysis on January 8, 1999, that assessed planned changes in Y-12 functions and activities that impact staffing needs and identified the need for additional critical skills. This analysis was later integrated into the Department's Workforce 21 Plan. This Plan anticipates changes in several functional areas within the next two years, which will require reallocating and/or retraining current staff. The Y-12 Site Integrated Modernization (Y-12 SIM) strategy integrates several projects to modernize production facilities, improve operational efficiencies, and improve current safety and health controls. This issue has three large-scale OR corrective actions. All three are scheduled for completion by September 2001.

Fire Protection Programs

The Y-12 Plant has not established and implemented an effective fire protection program. Required fire protection system upgrades are not complete, and there are deficiencies in the fire protection inspection, testing, and maintenance program.

Action Status

LMES has developed and issued an integrated schedule to address the completion of the fire alarm system of the Life Safety Upgrades project. LMES has also revised and issued the "Y-12 Fire Barrier Program (Y79-005)." Finally, LMES has completed a listing of all elements required to establish an effective fire protection program. This issue has 33 LMES corrective actions. Twenty have been closed, and the remaining 13 are planned for completion by December 2000.

Requirements Management

Although efforts are ongoing, the requirements management system at the Y-12 Plant has significant weaknesses. The standards/ requirements identification documents (S/RIDs) and Work Smart standards omit some requirements and contain obsolete requirements. Procedures (command media) used to flow down requirements to the work activity level have not been adequately maintained.

Action Status

LMES has published an approved Functional Area Responsibility List at Y-12 and completed a programmatic sitewide assessment of S/RIDs. This issue has nine LMES corrective actions, seven of which are considered closed. The first open action involves integrating site assessment programs to institutionalize the utilization of S/RIDs into the assessment process. The remaining open action is to conduct a pilot program of this revised assessment program in selected Y-12 facilities. These two corrective actions are scheduled for closure by December 1999.

Contractor Self-Assessment Programs

The implementation of the LMES self-assessment program (also referred to as "management assessments" by LMES) is not consistently effective. Some organizations did not have formal processes, assessments were not comprehensive, management walkarounds varied widely in quality and depth, and corrective actions resulting from management reviews were not timely.

Action Status

LMES has revised and issued Site Procedure Y60-902, "Management Assessment Program," to provide direction, set training requirements, and validate processes for the site management assessment program. Also, LMES has performed independent management assessments in three Y-12 organizations, including Enriched Uranium Operations, the Disassembly and Storage Organization, and the General Manufacturing Organization. This issue has six LMES corrective actions. Four corrective actions have been closed, and the remaining two are planned for closure by December 1999.

Lessons Learned Program

The lessons-learned program is not effectively capturing lessons learned from all sources, transmitting them down to the working level, and measuring the effectiveness of the program.

Action Status

LMES has improved its existing lessons-learned program by adding training modules that emphasize the utility of an effective lessons-learned program. LMES has also introduced worker feedback, accident investigation reviews, worker involvement in pre- and post-job briefings, and event critiques. An LMES assessment, conducted in August 1999, rated the revised lessons-learned program as satisfactory. LMES considers this issue to be closed.

Corrective Action and Deferred Maintenance Tracking

The Y-12 Plant does not have an effective system for managing and analyzing the backlog of corrective actions, findings, and deferred maintenance that is sufficient to help managers understand the safety significance of trends and generic implications.

Action Status

LMES has developed a program that defines the strategy for identifying/handling high-priority issues as well as reviewing issues for generic applicability. Also, LMES established an evaluation team that developed criteria for analyzing the backlog of deferred maintenance. Senior LMES management will use these criteria and the accompanying analysis to develop a path forward for effective management of deferred maintenance across the Y-12 site. This issue has 19 corrective actions. Eight have been closed, and the remaining 11 are planned for closure by March 2000.

Critical Skills Retention

The Y-12 Plant does not have a comprehensive approach for retaining the critical skills necessary to safely manage and operate the Y-12 Plant. LMES has not established a fully effective training program for supervisors, ES&H support staff, emergency responders, and engineers, and has not assigned sufficient staff to accomplish some safety-related functions (fire protection, industrial hygiene support during emergencies, and RCRA inspections).

Action Status

LMES has reviewed and verified supervisory baseline training, including supervisory/ leadership training, to qualify supervisors for the full scope of work activities for which they have been assigned responsibility. LMES plans to develop a formal needs assessment for Fire Department operations, including emergency response elements, to determine the correct level of personnel resources. This LMES issue has ten corrective actions. Three have been closed, and the remaining seven are scheduled for completion by March 2000.

Facility Transition Programs

DOE and LMES have not placed sufficient priority on ensuring the timely and effective implementation of the LMES facility transition program to effectively and efficiently maintain surplus facilities.

Action Status

LMES considers the Facility Transition Program Plan and the Integrated Schedule for the Shutdown of Buildings 9201-5, 9204-4, and 9201-2 as the primary drivers of the DP surplus facility management program at Y-12. LMES has designated approximately 50 facilities as surplus and conducts annual inspections of these facilities. Results of these inspections have indicated that none are considered to represent a high risk to the environment or to the safety or health of workers. LMES considers this issue closed.

Y-12 Roles and Responsibilities

Roles, responsibilities, and accountability for some Y-12 Plant positions and functions are not clearly defined (e.g., organizational interfaces between LMES and BJC for waste management, LMES line management oversight of sub-contractors, and interfaces between LMES independent assessment organizations).

Action Status

LMES established a Compliance Operational Safety Board on April 29, 1999, to administer the significant organizational changes during the communication and clarification of roles and responsibilities between site line and support organizations. LMES has also established a multi-organizational team to evaluate and recommend procedures governing the work responsibilities of subcontractors to assure that ISM requirements are met. This LMES issue has eight corrective actions. Six are closed, and the remaining two are projected for completion by December 1999.

MAJOR RECENT EVENTS

On December 8, 1999, a severe sodium-potassium chemical reaction at Building 9201-5 resulted in burn injuries to ten employees and subsequent declaration of an operational emergency. One individual suffered serious burn injuries and was airlifted to a burn unit in Chattanooga, Tennessee. In addition, two workers were hospitalized, in stable condition, in Oak Ridge, Tennessee. The remaining seven workers were treated and released from the Y-12 Health Services facility.

On December 10, 1999, a DOE Type A accident investigation team arrived at the site and began its evaluation of this event. The team's final report is expected in February 2000.

MAJOR RECENT ASSESSEMENTS

None.

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Appendix A. Key Facility Summary

FACILITY NAME	MISSION/STATUS	HAZARD CLASSIFICATION/ AUTHORIZATION BASIS	WORST CASE DESIGN BASIS ACCIDENT	PRINCIPAL HAZARDS AND VULNERABILITIES
Building 9201-4, (Alpha 4)	**Mission:** Originally used for electromagnetic separation of uranium; later used for separation of lithium isotopes. All major plant utilities run through the building (it is the hub of the entire electrical system of Y-12). **Status:** Shut down, awaiting D&D.	Category III facility; Authorization Basis – Preliminary Hazard Classification, Y/M-064, 3/91	Building collapse in moderate seismic event	**Hazards:** Significant quantities of legacy wastes, i.e., mercury, asbestos, lithium, lithium hydroxide, mixed wastes
Building 9201-5, (Alpha 5)	**Mission:** Used to process and manufacture depleted uranium parts. **Status:** Operational.	Category III facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant. HS/10/F/2037; HS/10/F/2038; HS/12/F/5; HS/20/F/5; HS/19/F/4; and HS/11/F/3 (HS=hazard screening)	Fires, explosions, and loss of confinement	**Hazards:** Significant quantities of depleted uranium, combustibles contaminated with enriched uranium, hazardous chemicals
Building 9201-5N/5W, (Alpha 5N/5W)	**Mission:** Used to machine depleted uranium. **Status:** Operational.	Category III facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant Basis for interim operation (BIO) for Building 9201-5N/5W (U), Y/ENG//BIO-002, R1 and operational safety requirement (OSR): Y/NA-1817, R0.	Fires	**Hazards:** Significant quantities of depleted uranium, hazardous chemicals
Building 9204-2, (Beta 2)	**Mission:** Used for lithium production and manufacturing. **Status:** Operational.	Low hazard, non-nuclear facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). BIO for Building 9204-2, Lithium Operations (U), SAR/OSR: Y/ENG-SAR-OSR-001, R0 and HS/24/F/2.	Fires, loss of confinement, explosions, earthquake	**Hazards:** Significant quantities of lithium, other hazardous chemicals
Building 9204-2E, (Beta 2E)	**Mission:** Currently used for: (1) processing, cleaning, assembling, welding, and preparing nuclear components for shipment; (2) disassembling, storing, and preparing non-nuclear components for shipment; (3) dismantlement; and (4) quality evaluation and component certification. **Status:** Operational.	Category II facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). BIO for Building 9204-2E (U), Y/ENG/BIO-003, R1; OSR: Y/75-1314, R4, Chg 1; and HS/24/F/2 Draft FSAR submitted August 1998.	Nuclear criticality and fires	**Hazards:** Significant quantities of special nuclear material (SNM), hazardous chemicals

Appendix A. Key Facility Summary (cont'd)

FACILITY NAME	MISSION/STATUS	HAZARD CLASSIFICATION/ AUTHORIZATION BASIS	WORST CASE DESIGN BASIS ACCIDENT	PRINCIPAL HAZARDS AND VULNERABILITIES
Building 9204-4, (Beta 4)	**Mission:** The primary quality evaluation facility for the enduring stockpile and the storage of warhead components produced at the Y-12 Plant. The quality evaluation mission of this facility is being moved to Building 9204-2E; the move is scheduled to be complete by the year 2002. A portion of the facility is also used for processing depleted uranium and non-uranium metals. **Status:** Operational.	Category II facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). BIO for Building 9204-4 (U), Y/ENG/BIO-004, R2 approved October 16, 1998; and OSR:Y/TS-1317, R4	Nuclear criticality, fires, explosions, and loss of confinement	**Hazards:** Significant quantities of SNM, hazardous chemicals
Building 9206	**Mission:** Was used to recover enriched uranium from scrap and trash. **Status:** In stand-down, with limited operations being performed, due to conduct of operations concerns. Building 9206, which has been scheduled for future D&D, was cited as one of the most vulnerable facilities in the DOE complex in the HEU study.	Category II facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). BIO for Building 9206 Complex (U), BIO is scheduled to be resubmitted for approval by January 1999. HS/4/F/3; FSAR:Y/MA-6290; OSR:Y/MA-6296, R2; and OSR:Y/TS-852, R3	Nuclear criticality, fires, and earthquake	**Hazards:** Significant quantities of SNM, hazardous chemicals
Building 9212 Complex	**Mission:** Used to recover and purify enriched uranium and process enriched uranium into usable products or into forms suitable for long-term storage. Primary facility operations include chemical recovery and casting. **Status:** Partially restarted (metal) with limited operations being performed due to conduct of operations concerns. This facility was cited as one of the most vulnerable facilities in the DOE complex in the HEU study.	Category II facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). BIO for Building 9212 Enriched Uranium Operations Complex (U) Y/MA-7254, R4; OSR: Y/MA-7255, R8; and HS/16/F/3	Nuclear criticality, fires, explosions, earthquake, tornado	**Hazards:** Significant quantities of enriched uranium and hazardous chemicals

Appendix A. Key Facility Summary (cont'd)

FACILITY NAME	MISSION/STATUS	HAZARD CLASSIFICATION/ AUTHORIZATION BASIS	WORST CASE DESIGN BASIS ACCIDENT	PRINCIPAL HAZARDS AND VULNERABILITIES
Building 9215 Complex	**Mission:** Used for processing and manufacturing enriched and depleted uranium parts. The depleted uranium and Enriched Uranium Transport Organization portions of the facility are operational. Enriched uranium operations (EUO) are scheduled for restart, and planning and development of a critical path schedule are currently in progress. **Status:** EUO in stand-down, limited operations. Depleted uranium operations (DUO) operational.	Category II facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). BIO for Building 9215 Complex (U), and Y/ENG/BIO-007. BIO:Y/MA-7290; OSR:Y/MA-7291; HS/18/F/8; HS/17/F/7; and Draft 9215 BIO on depleted uranium. Restart of EUO has been partially achieved; facility personnel are executing a critical path schedule for additional Restart activities.	Nuclear criticality, fires, explosions, and earthquake	**Hazards:** Significant quantities of enriched and depleted uranium and hazardous chemicals
Building 9720-5	**Mission:** Used for storing enriched uranium weapons parts, assemblies, and other SNM. **Status:** Operational.	Category II facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). BIO for Building 9720-5 SAR:Y/SAR-010/IA approved March 6, 1998; TSA has been submitted; BIO:Y/ENG/BIO-010, R0; and OSR:Y/TS-1316, R3, Chg 1.	Nuclear criticality and fires	**Hazards:** Significant quantities of SNM and hazardous chemicals
Building 9995	**Mission:** Used as an analytical laboratory, among other tasks, to assay nuclear components. **Status:** Operational	Category II facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). The Final Safety Analysis Report, Y/ENG/SAR-79 was approved 4/10/98.	Nuclear criticality and fires	**Hazards:** Laboratory quantities of SNM and hazardous chemicals
SNM Transportation	**Mission:** Medium-sized package trucks are used to transport SNM within Y-12. **Status:** The trucks are operational.	Category II facility; authorization basis is the set of documents specified in the Authorization Basis List for the Y-12 Plant (YSO-ABL-01, R14). TSR: Y/TS-1315, R0; SAR:Y/MA-6398; SAR: Y/ENG/SAR-083 approved April 23, 1998; and HS/61/F/1	Nuclear criticality, fires, and loss of confinement	**Hazards:** Significant quantities of SNM

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